

East Kingston – NH 107A Bridge Rehabilitation

Public Informational Meeting

June 29, 2016



NH 107A over Pan Am Railway & a residential drive
Project # 26942

Meeting Agenda

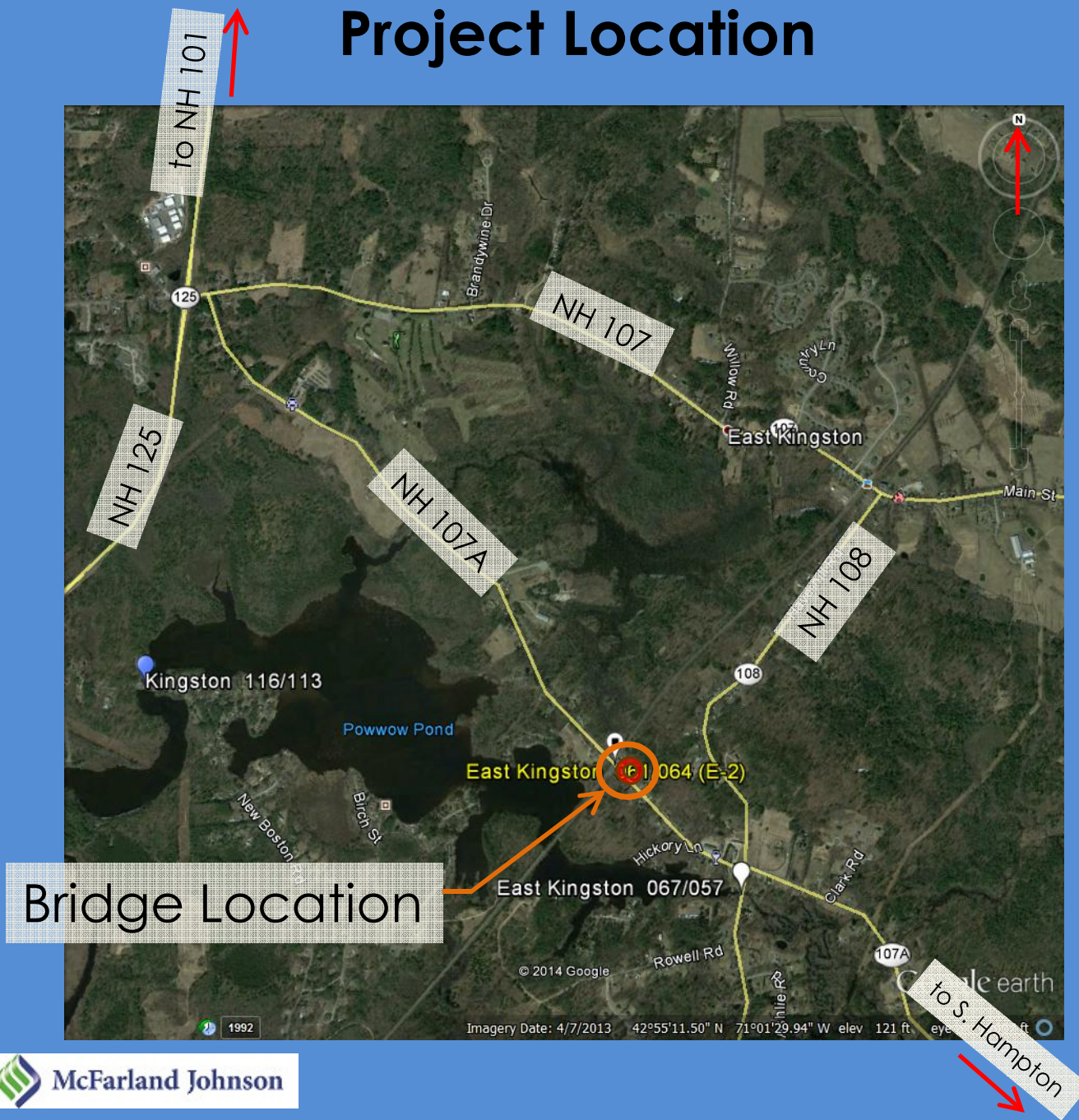
Welcome & Introductions

Purpose - Rehabilitation of deficient (red-listed) bridge

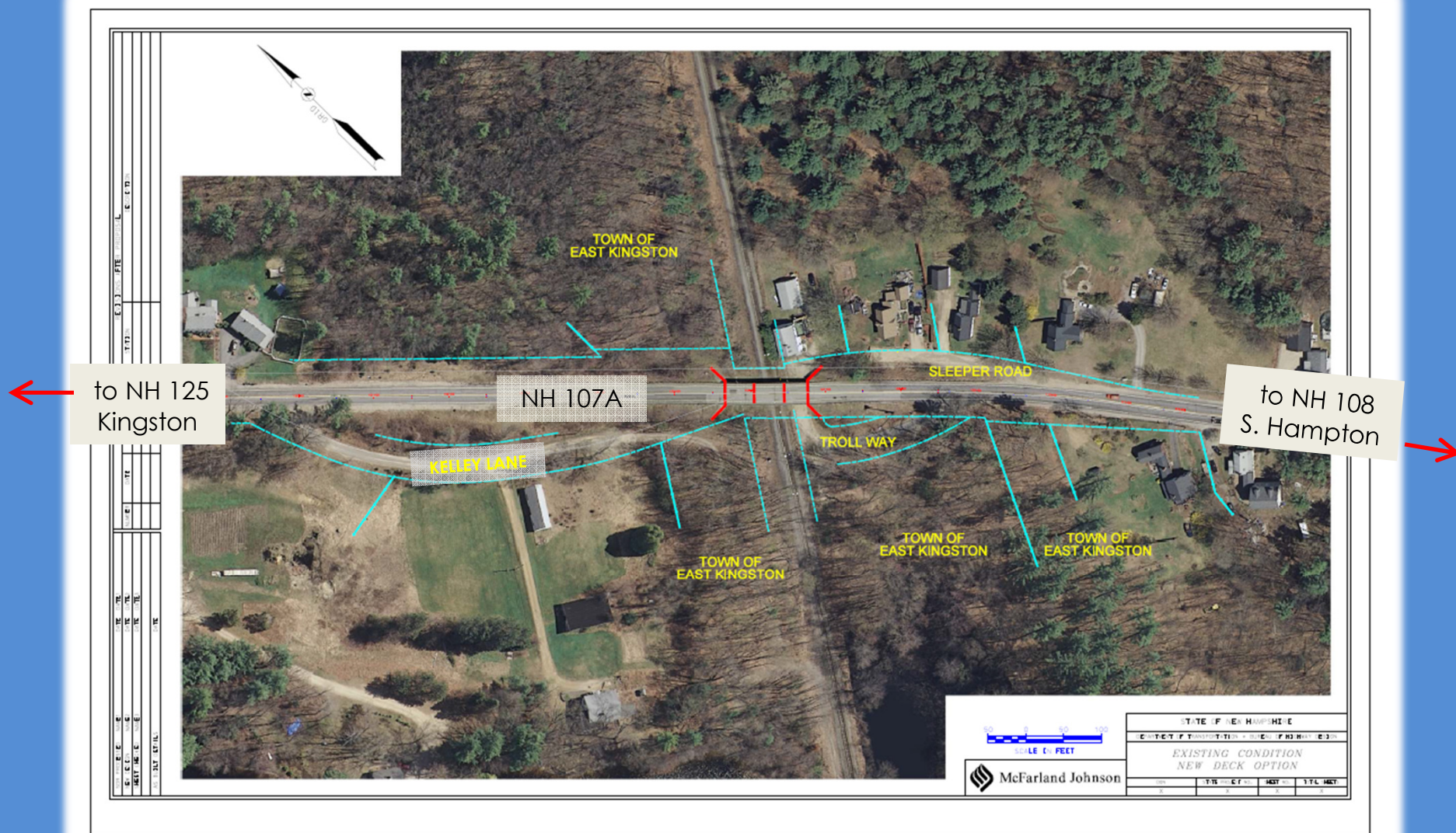
Tonight's Presentation:

- Bridge Condition & Project Need
- Alternatives Considered & Preferred Alternative
- Input Needed
- Next Steps

Project Location



Aerial View of Site



About the Bridge

- Steel stringer bridge built c.1937 as a railroad grade separation
- Bridge consists of three 40' simple spans; the railroad occupies the center span (Amtrak Downeaster runs daily)
- Under clearance is 18'-6" above railroad
- Bridge roadway width is 28' between curbs
- Carries approximately 2200 vehicles per day
- Last major rehabilitation was c.1969 (replaced concrete bridge deck and bridge railing)

Project Need

- Concrete bridge deck in Serious condition with timber blocking to prevent concrete from falling
- Structural steel paint is fair with some rusting
- Substructure in Satisfactory condition; abutment and pier concrete foundations have spalls and cracking which can be repaired
- Bridge is on State's Red List (since 2010)
- Bridge priority #38 (2016)

Site Photos



Looking South
from Kelley Lane



Looking South
near Bridge

Site Photos



Looking North
from Sleeper Road



Aluminum Bridge Rail
Installed c.1969

Site Photos



West Elevation
and Troll Way (a residential drive)

Site Photos



Troll Way

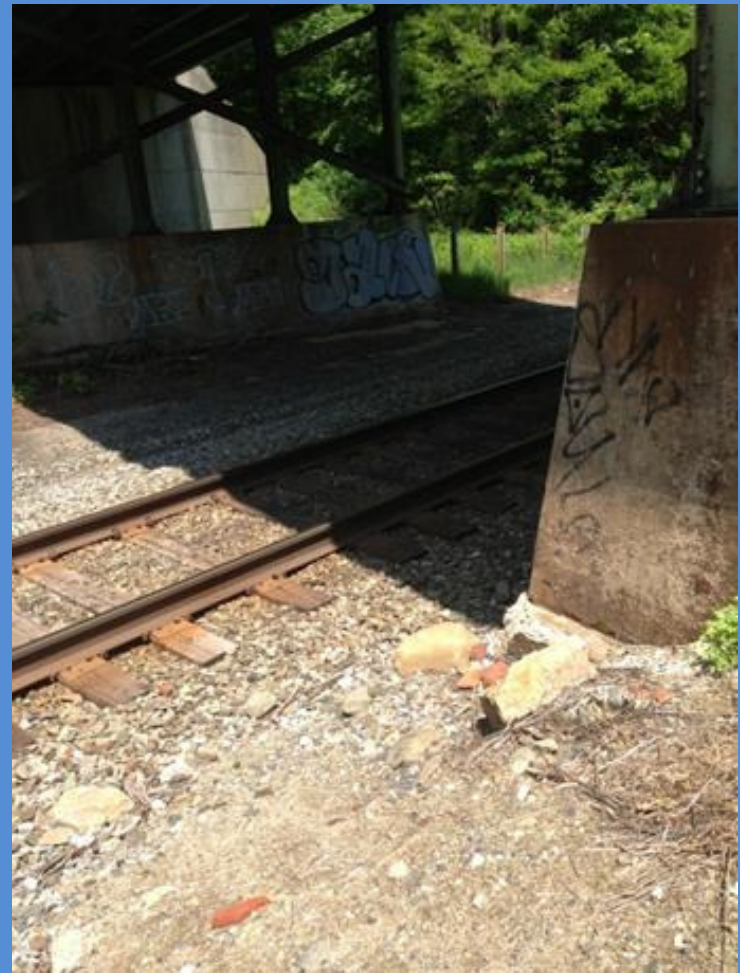


South Abutment

Site Photos



Steel Piers (Bents)



Concrete Foundations

Site Photos



Underside of Bridge Deck
with Timber Blocking



Bridge Shoes
and Abutment Backwall

Tasks Completed to Date

- Public Officials Meeting December 8, 2014
- Cultural Resource Agency Meeting September 10, 2015
- Evaluated Alternatives for addressing the Red-List Bridge including:
 - ❑ Bridge Rehabilitation (superstructure replacement);
 - ❑ Complete Bridge Replacement (three options); and
 - ❑ Do Nothing

Alternatives Evaluated

Bridge Rehabilitation:

- Replace bridge superstructure (concrete deck and steel stringers)
- Maintain existing roadway grade and under clearance of 18'-6" above the railroad
- All work within the State owned right-of-way
- Estimated construction cost \$1.0 Million (funding is Federal & State – no Town funding)

Alternatives Evaluated

Complete Bridge Replacement:

- Replace bridge with a wider structure of 32 feet between curbs (to provide 5-foot shoulders)
- Both single and multi-span structures considered
- Requires a minimum 3 foot raise in the roadway grade to provide an under clearance of 21'-6" above the railroad
- Involves impacts beyond the State owned right-of-way
- Estimated construction cost ranges from \$2.5 to \$2.8 Million (funding is Federal & State – no Town funding)

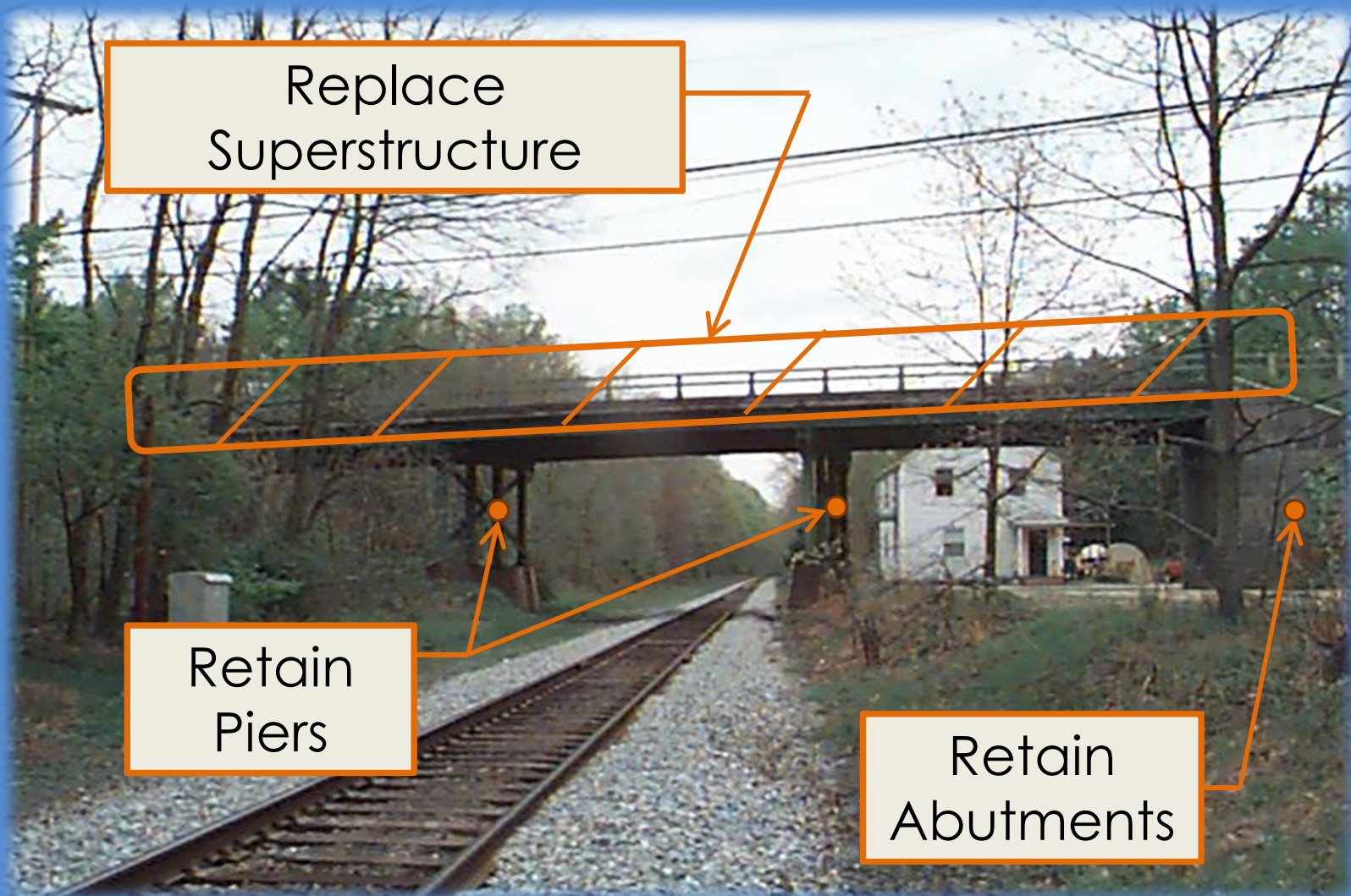
Preferred Alternative Is Bridge Rehabilitation

- Meets the project need by addressing the deficient bridge and extending its service life
- Maintains existing access to residences and Town owned parcels
- Replaces the superstructure (concrete deck and steel stringers) while maintaining profile grade and out-to-out width of bridge deck
- Makes necessary safety improvements by upgrading the existing substandard aluminum bridge rail and approach rail with T2 steel rail and snow screening

Preferred Alternative Is Bridge Rehabilitation

- Avoids time consuming foundation work by reusing existing abutments and piers which are in satisfactory condition and can be repaired
- Makes use of precast concrete components to minimize field-cast concrete and reduce construction duration
- Includes limited approach roadway work as necessary to provide a smooth transition to the new bridge deck

Rehabilitation Details



Rehabilitation Details

Accelerated Bridge Construction



Precast Bridge Unit (PBU) Delivered to Site

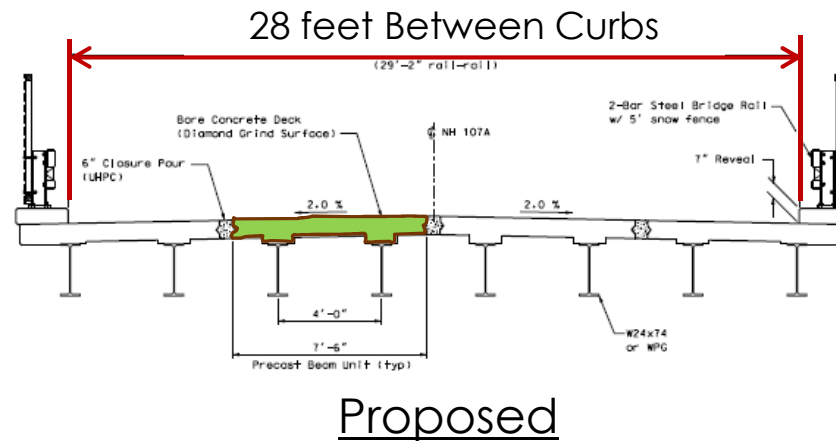
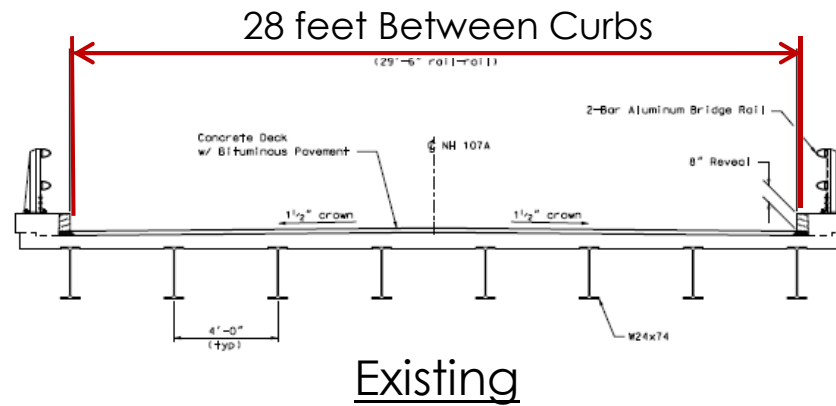
Rehabilitation Details

Accelerated Bridge Construction



PBU Installation

Rehabilitation Details



4 PBUs and 2% crown proposed

Traffic Control

Close Bridge – Detour Traffic

- Bridge will be closed during construction, which helps to reduce cost and expedite the work
- The bridge closure will not exceed 21 days (work hours to be Mon – Sat 7:00 am – 7:00 pm; no work on Sunday)
- Bridge closure assumed to occur during the school summer vacation period (mid June to late August)
- Requires coordination with Emergency Response Providers and School(s) for school vacation dates

Signed Detour



Detour via NH 107 & NH 108
During Bridge Closure

Input Needed

- Any Town events that we should be aware of?
- Is the school summer vacation period the preferred time of year for the proposed 21 day bridge closure?
- Allow construction work on Sunday?
- Where does the ambulance and fire service come from?
- Bike and pedestrian use of the bridge?

Next Steps & Schedule

- Complete NEPA process (National Environmental Policy Act) for environmental permitting and Section 106 consultation
- Develop Contract Plans and Documents
- Advertising date is currently September 2016
- Construction will take place in summer 2017 (involves a 21 day bridge closure)

Cultural Resources – Historic Properties

- Project information reported to FHWA, NHDHR for technical review and consultation, and to make a *Determination of Effect*
- If the project is found to have an *Adverse Effect* on historic properties, identify ways to minimize or mitigate the adverse effects
- Interested persons or organizations may request “*Consulting Party*” status from FHWA

Contact Jamie Sikora, 603-401-4870 or
jamie.sikora@fhwa.dot.gov

Thank You

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Comments & Questions



West Side.

c. 1940